Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-44 (canceled).

45. (Currently Amended) A method for binding nucleic acids to a solid phase comprising contacting a solution containing nucleic acids with a solid phase containing hydrophobic groups for binding nucleic acids and hydrophilic groups for avoiding agglomeration of said solid phase ~~which has hydrophobic and hydrophilic groups~~ on its surface, wherein a salt and polyethylene glycol are present in said solution during binding of the nucleic acids to said solid phase and said nucleic acids are reversibly and sequence-unspecifically bound to the surface via said hydrophobic groups.

46. (Previously Presented) The method as claimed in claim 45, wherein said surface has alkyl or aryl groups as hydrophobic groups.

47. (Previously Presented) The method as claimed in claim 46, wherein the alkyl groups are selected from C_8 alkyl, C_{18} alkyl and mixtures thereof.

48. (Previously Presented) The method as claimed in claim 45, wherein the surface has hydroxyl groups as hydrophilic groups.

49. (Previously Presented) The method as claimed in claim 45, wherein the solid phase is solid particles.

50. (Previously Presented) The method as claimed in claim 45, wherein the solid phase is magnetic.

51. (Previously Presented) The method as claimed in claim 45, wherein the salt is an alkali, alkaline earth or/and ammonium halide.

52. (Previously Presented) The method as claimed in claim 45, wherein said polyethylene glycol has an average molar mass of 1000 to 20000 g/mol.

53. (Previously Presented) The method as claimed in claim 45, wherein the salt is at a concentration of 5 mmol/l to 4 mol/l.

54. (Previously Presented) The method as claimed in claim 45, wherein said polyethylene glycol is at a concentration of 5% by weight to 40% by weight.

55. (Previously Presented) The method as claimed in claim 45, wherein the nucleic acids are DNA.

56. (Previously Presented) The method as claimed in claim 45, wherein the nucleic acids are amplification products.

57. (Previously Presented) The method as claimed in claim 45, wherein single-stranded or double-stranded nucleic acids are selectively bound.

58. (Previously Presented) The method as claimed in claim 45, wherein the nucleic acid is selectively bound with regard to size in a range of $\geq$ 5 nucleotides to $\leq$ 1000 nucleotides.

59. (Currently Amended) A method for isolating or/and purifying nucleic acids comprising

(a) providing a solution containing nucleic acids,

(b) contacting the solution containing nucleic acids with a solid phase which has hydrophobic and hydrophilic groups on its surface, wherein a salt and polyethylene glycol are present in said solution during binding of the nucleic acids via said hydrophobic groups to said solid phase and the nucleic acid is reversibly and sequence-unspecifically bound to the surface of the solid phase, and

(c) separating the solid phase from the solution.

60. (Previously Presented) The method according to claim 59, wherein said nucleic acid is detached from the solid phase.

61. (Previously Presented) The method as claimed in claim 59, wherein the solid phase is magnetic and the solid phase is separated from the solution by magnetic means.

62. (Previously Presented) The method as claimed in claim 59, wherein the solid phase separated in step (c) is washed with a buffer solution which detaches impurities bound to the solid phase but not the nucleic acids bound to the solid phase.

63. (Currently Amended) The method as claimed in claim 60 ~~59~~, wherein the nucleic acid is detached ~~in step (d)~~ by means of an elution solution.

64. (Currently Amended) The method as claimed in claim 60 ~~59~~, wherein the nucleic acid detached from the solid phase and the solid phase are separated by magnetic means.

65. (Currently Amended) The method as claimed in claim 60 ~~59~~, further comprising subjecting the nucleic acid obtained to a mass spectrometric analysis.

66. (Previously Presented) A method for determining a nucleotide sequence comprising

(a) binding a nucleic acid strand to a solid phase according to the method of claim 45, and

(b) sequencing the nucleic acid strand by known methods.

67. (Previously Presented) The method as claimed in claim 66, further comprising (c) purifying the sequencing products.

68. (Currently Amended) A method for ~~synthesizing~~ extending nucleic acids comprising the steps

(a) binding a nucleic acid to a solid phase according to the method of claim 45, and

(b) extending the nucleic acid by at least one nucleotide by known methods.

69. (Currently Amended) A method for detecting an analyte in a sample, comprising

contacting a solution containing nucleic acids with a solid phase, wherein said solid phase has hydrophobic and hydrophilic groups on the surface, and wherein a salt and polyethylene glycol are present in said solution during binding of the nucleic acids to said solid phase and the nucleic acids are reversibly and sequence-unspecifically bound to the surface of said solid phase via said hydrophobic groups,

subsequently contacting the solid phase with a sample, and

detecting any analyte by means of the binding to the bound nucleic acids.

70. (Currently Amended) A reagent kit for carrying out a method as claimed in claim 45 comprising:

(a) a binding buffer which contains a salt and a polyethylene glycol, and

(b) a solid phase which has ~~a~~ hydrophobic groups which bind nucleic acids and hydrophilic groups which prevent agglomeration, on its surface.

71. (Previously Presented) The reagent kit as claimed in claim 70, further comprising,

(c) an elution buffer that can be used to detach the nucleic acid bound to this surface, and

(d) a washing buffer which can be used to separate impurities bound to the solid phase.

Claims 72-89 (Canceled).